SOUTH DAKOTA
DEPARTMENT
OF HEALTH

PUBLIC HEALTH BULLETIN

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Human Prion Disease Surveillance

by Lon Kightlinger, MSPH, PhD, State Epidemiologist, Department of Health

Human transmissible spongiform encephalopathies, i.e. Creutzfeldt-Jakob disease (CJD) and variant Creutzfeldt-Jakob disease (vCJD) are reportable diseases in South Dakota.

The need to strengthen human prion disease surveillance has been underlined by the recent discovery of bovine spongiform encephalopathy in Canada and the USA. It is important that cases of suspected prion disease are accurately diagnosed through examination of tissue obtained at autopsy as tissue examination is the only definitive way to identify variant CJD and the various forms of prion disease.

The South Dakota Department of Health (SD-DOH) collaborates with the National Prion Disease Pathology Surveillance Center (NPDPSC) at Case Western Reserve University, Cleveland. The NPDPSC was established in 1997 by the Centers for Disease Control and Prevention (CDC) in collaboration with the American Association of Neuropathologists.

The NPDPSC performs histopathology, immunohistochemistry, Western blot and prion gene analysis in autopsy and biopsy tissues to establish not only the diagnosis but also the type of prion disease. Cerebrospinal fluid (CSF) is also examined for the presence of the CJD protein marker 14-3-3. All tests are free of charge and the results reported to the health care provider.

To improve detection of suspected prion diseases we would like to ask you to:

1. Report all suspected cases of prion disease to the SD-DOH (1-800-592-1861) and to NPDPSC (216-368-0587) as soon as the diagnosis is suspected. Staff from SD-DOH or NPDPSC may contact the physician to monitor the course of the disease.
2. Discuss the issue of autopsy with the patient's family when appropriate. In the NPDPSC's experience, the great majority of the families give consent for autopsy. NPDPSC can help make arrangements for the autopsy by identifying institutions willing to perform the procedure, and,

when necessary, by covering the expenses.

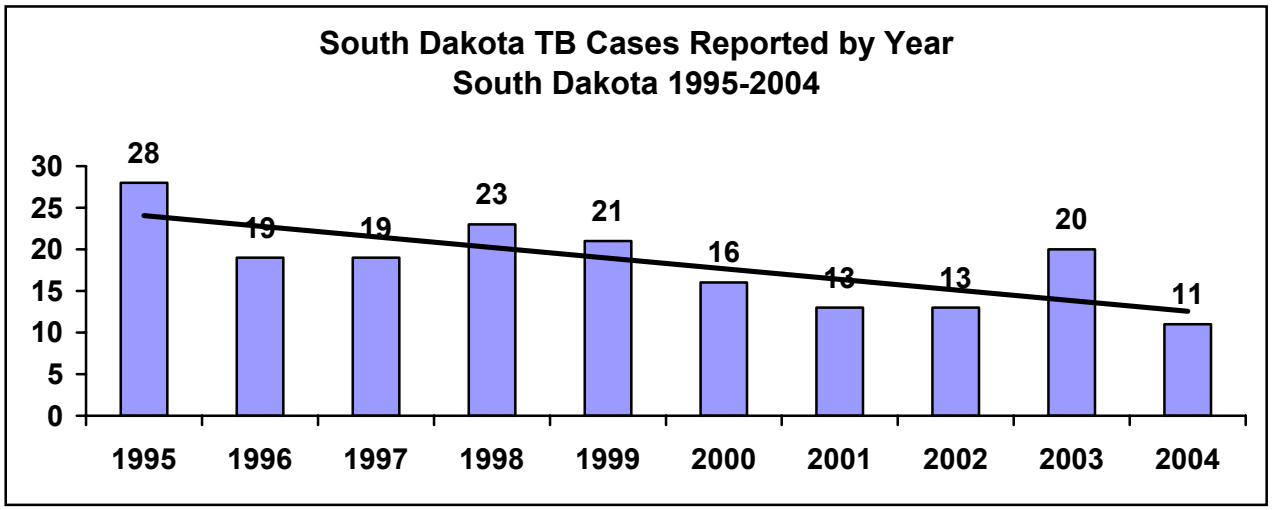
3. Submit clinical information to SD-DOH or NPDPSC upon request regardless of whether the autopsy was performed or not. Although it is essential that tissue be examined in as many cases as possible, if an autopsy cannot be performed, the case will be classified as possible or probable prion disease based on clinical data. The Surveillance Center is fully compliant with HIPAA regulations.
4. Clearly indicate the diagnosis of CJD on the patient's death certificate when the clinical diagnosis applies because CJD is also monitored from mortality data.
5. Advise patients' families about the CJD Foundation, which operates a national toll-free line to assist families and professionals (800-659-1991).

Information about the NPDPSC, specimen collection and shipping instructions can be obtained by visiting its website at www.cjdsurveillance.com or calling 216-368-0587.

2004 South Dakota Tuberculosis Morbidity

by Kristin Rounds, Tuberculosis Control Coordinator
Office of Disease Prevention, South Dakota Department of Health

There were 11 cases of tuberculosis reported to the South Dakota Department of Health in 2004, which is a decrease of 9 cases from 2003. Cases were widely distributed throughout the state with 7 counties reporting TB cases. Three of these counties had not reported TB cases for 3 or more years. All TB cases reported during 2004 were male. During 2004, there was 1 INH-resistant TB case reported. In addition, there was 1 TB case reported in long-term care facility, 2 TB cases reported in correctional facilities and 2 HIV co-infected TB patients reported. During 2004, there were no cases reported in children less than 4 years of age. During 2004, the TB case rate was 1.5 cases per 100,000 as compared to 2.6 cases per 100,000 in 2003. In addition, there were 1,405 contacts to infectious TB identified and managed which is more than twice the highest number ever reported in the state.

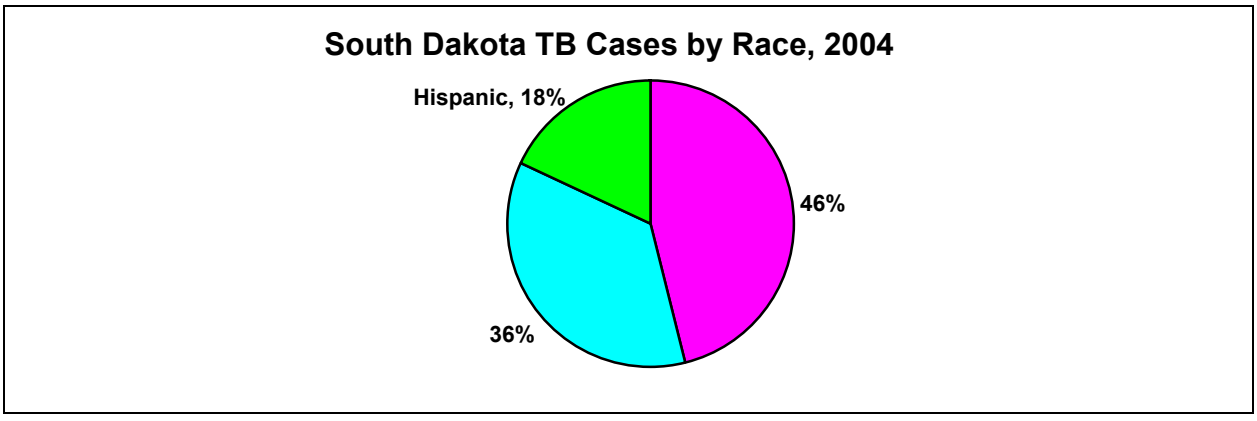


TB Cases Reported by Sex and Age, South Dakota 2004

AGE (years)	MALE	FEMALE	TOTAL	% OF CASES
0-4	0	0	**0**	0%
5-9	0	0	**0**	0%
10-14	0	0	**0**	0%
15-19	0	0	**0**	0%
20-29	2	0	**2**	18%
30-39	3	0	**3**	28%
40-49	0	0	**0**	0%
50-59	2	0	**2**	18%
60-69	1	0	**1**	9%
70-79	1	0	**1**	9%
80-89	2	0	**2**	18%
90+	0	0	**0**	0%
TOTAL	**11**	**0**	**11**	**100%**

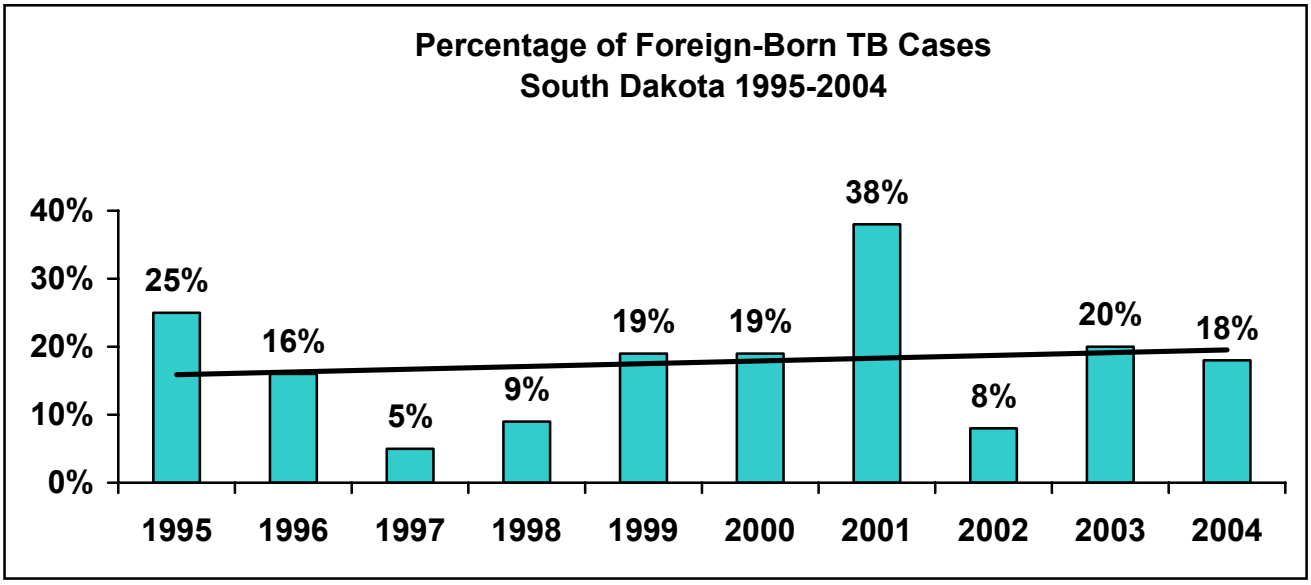
TB Cases Reported by Sex and Race, South Dakota 2004

RACE	MALE	FEMALE	TOTAL	% OF CASES
Native American	5	0	**5**	46%
White	4	0	**4**	36%
Black	0	0	**0**	0%
Hispanic	2	0	**2**	18%
Asian	0	0	**0**	0%
TOTAL	**11**	**0**	**11**	**100%**



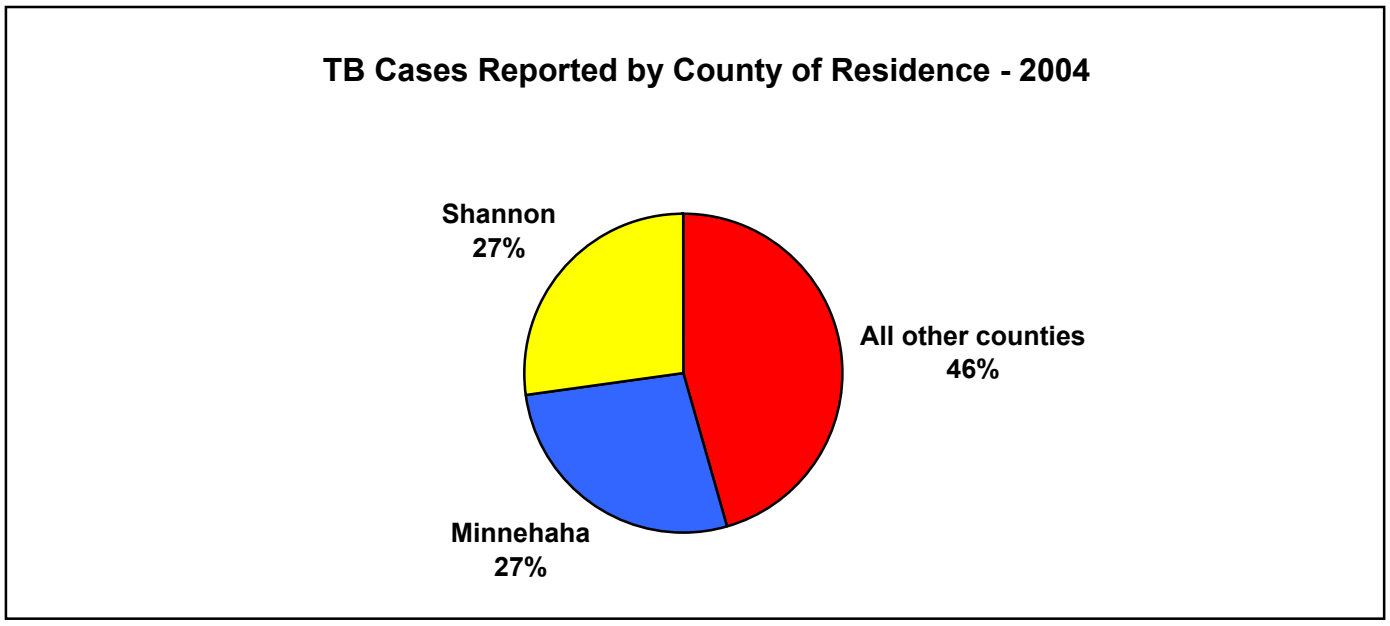
TB Morbidity Incidence Rates per 100,000 by Race & Year, SD 1999-2004

RACE	1999	2000	2001	2002	2003	2004
All Races	3.0	2.3	1.7	1.7	2.6	1.5
Native American	27.7	17.8	5.9	16.1	14.6	7.3
White	0.6	0.6	0.4	0.3	0.9	0.6
Black	Not available	Not available	48.4	0.0	0.0	0.0
Asian	Not available	Not available	17.4	0.0	69.4	0.0
All Other Races	37.9*	37.9*	38.5	0.0	0.0	41.3
* Specific race data not available from the census for this year other than White & Native American.						



TB Cases Reported by County of Residence, South Dakota 2004

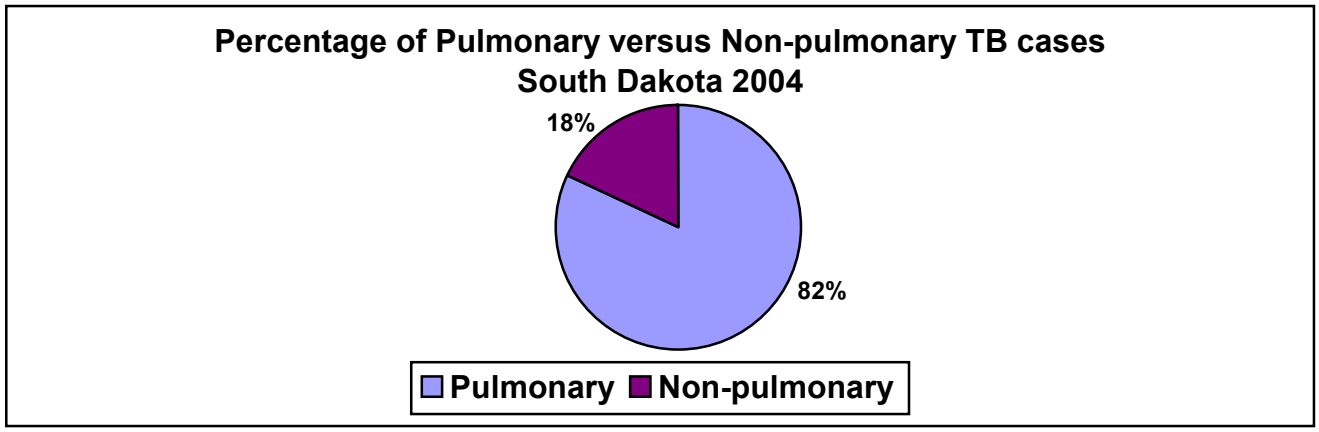
County	# of TB cases	County	# of TB cases
Custer	1	Lake	1
Davison	1	Minnehaha	3
Hanson	1	Shannon	3
Jackson	1		



Pulmonary and Non-pulmonary TB Cases by Race, South Dakota 2004

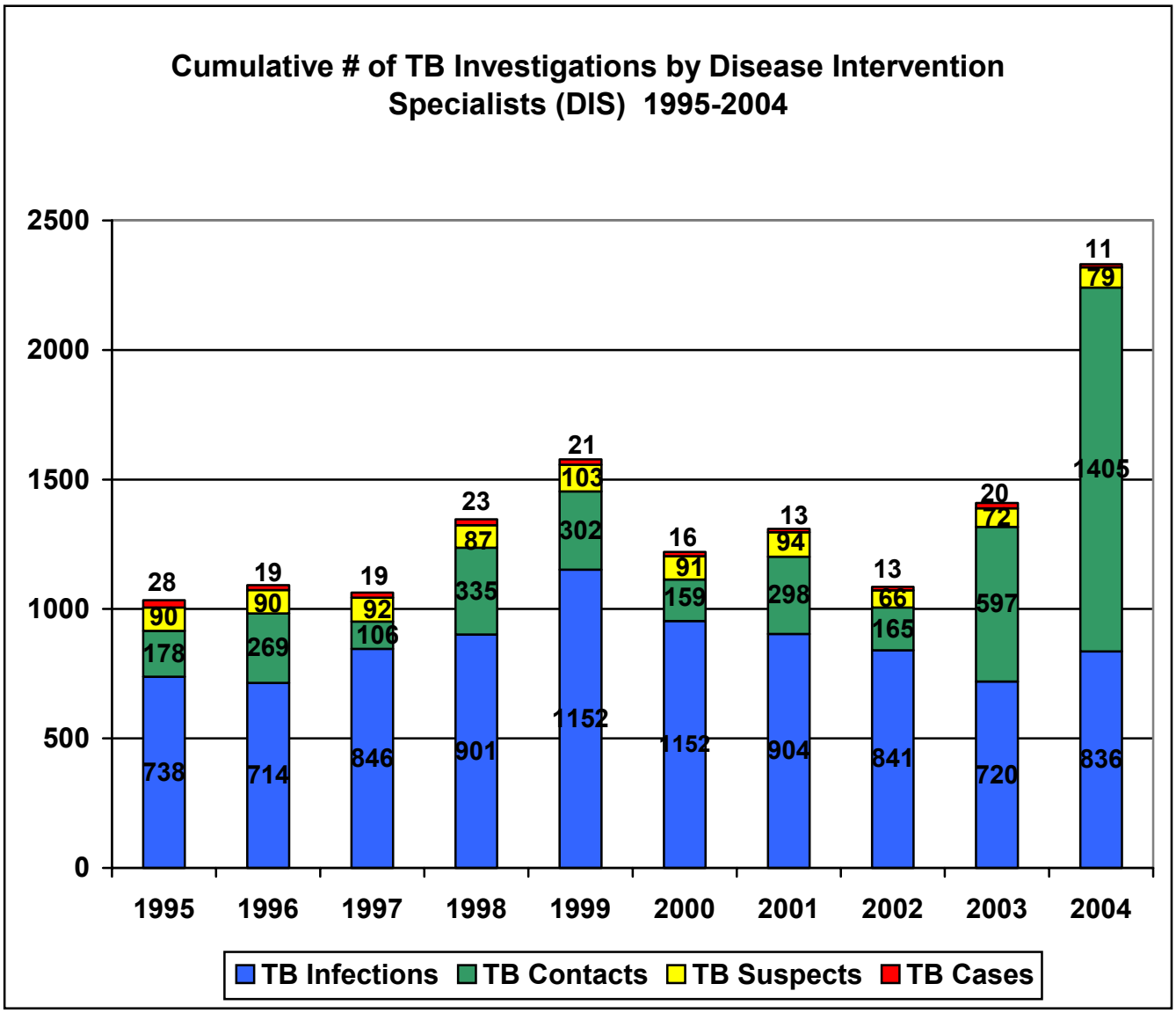
Site of Disease	Native American	White	Black	Hispanic	Asian	TOTAL
Pulmonary	3	4	0	2	0	**9**
Non-pulmonary	2	0	0	0	0	**2**
Both	0	0	0	0	0	**0**
TOTAL	**5**	**4**	**0**	**2**	**0**	**11**

The non-pulmonary sites of disease included the following: renal, spinal tissue (not meningitis)



TB Mortality by Race and Year, South Dakota 2001-2004

RACE	2001		2002		2003		2004	
All races	1/13	8%	4/13	31%	4/20	20%	1/11	9%
Native American	¼	25%	4/11	36%	4/10	40%	1/5	20%
White	0/3	0%	0/2	0%	0/6	0%	0/4	0%
Black	0/3	0%	---	---	---	---	---	---
Hispanic	0/2	0%	---	---	---	---	0/2	0%
Asian	0/1	0%	---	---	0/4	0%	---	---

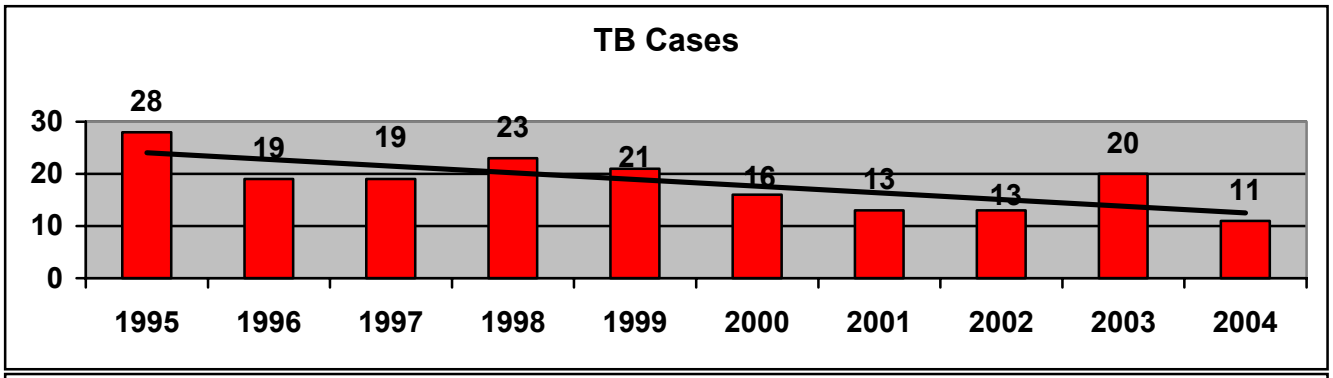


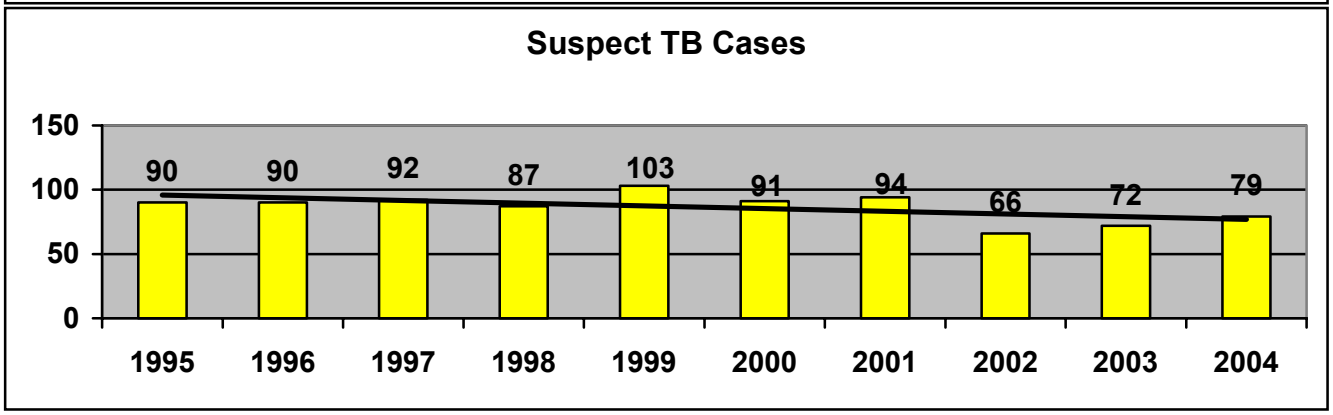
Patients Started on Treatment for Latent TB Infection, SD 1995-2004

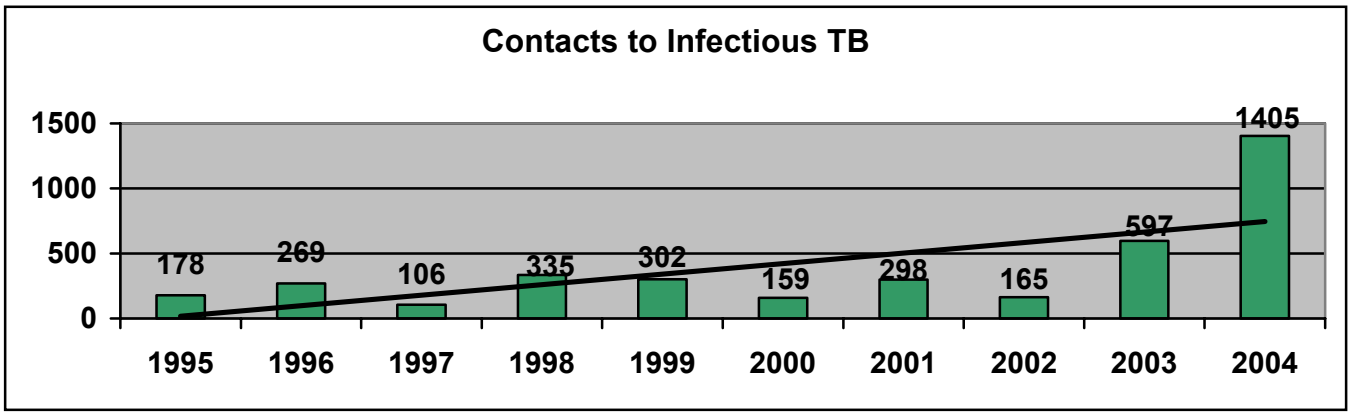
1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
579	640	631	683	771	592	670	580	470	528

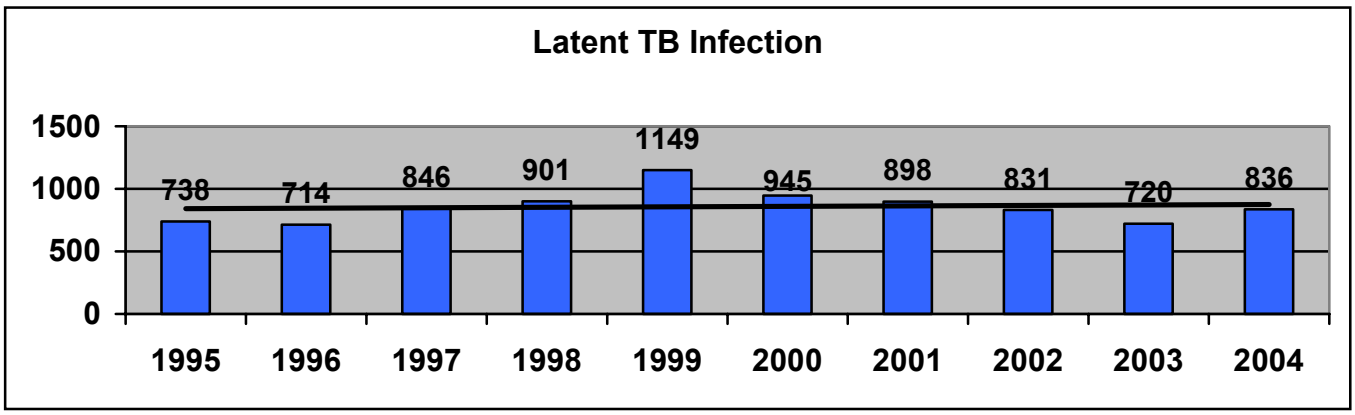
*2004 data is provisional

Comparison of TB Cases, TB Suspects, TB Contacts and Latent TB Infections Reported from 1995-2004

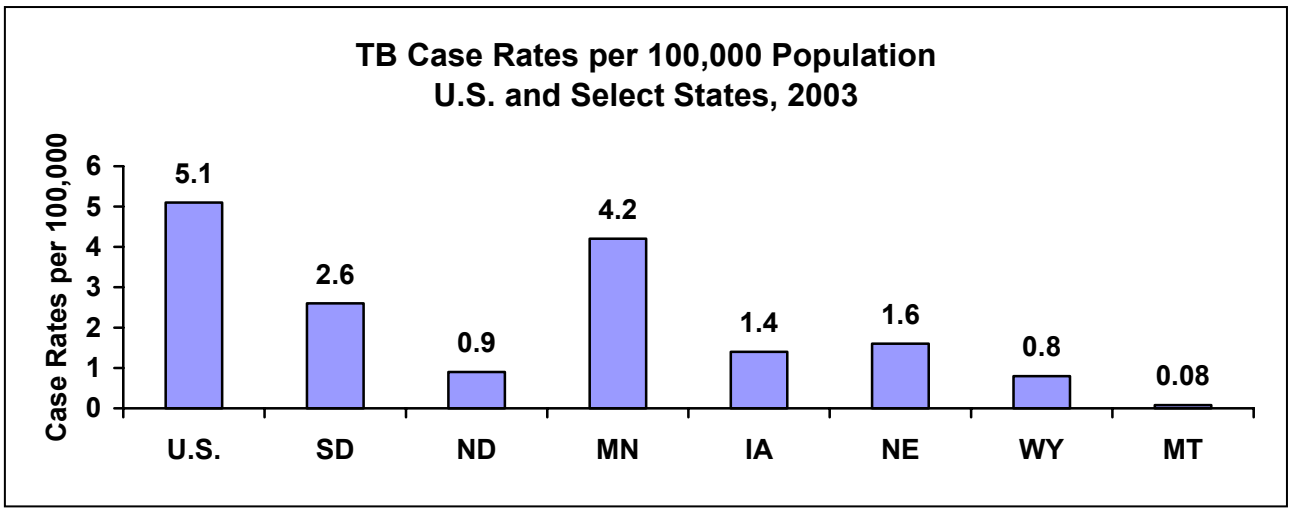


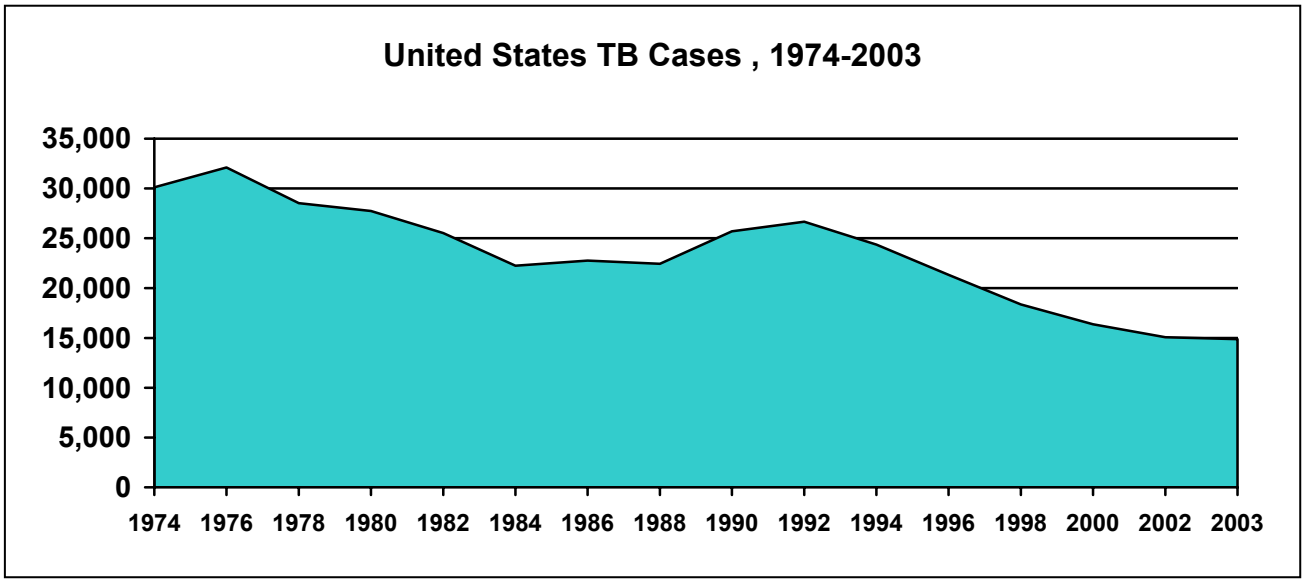






2003 US and Regional TB Statistical Information





TB Cases and Case Rates Per 100,000, United States 1993-2003

Year	Number of TB Cases	TB Case Rate	% Change of Number	% Change of Rate
1993	25,287	9.8	-5.2%	-6.7%
1994	24,361	9.4	-3.7%	-4.1%
1995	22,860	8.7	-6.2%	-7.4%
1996	21,337	8.0	-6.7%	-8.0%
1997	19,851	7.4	-7.0%	-7.5%
1998	18,361	6.8	-7.5%	-8.1%
1999	17,531	6.4	-4.5%	-5.9%
2000	16,377	5.8	-6.6%	-9.4%
2001	15,989	5.6	-2.4%	-3.4%
2002	15,078	5.2	-6.0%	-7.0%
2003	14,874	5.1	-1.3%	-1.9%

Reportable Disease List Updated

The South Dakota Reportable Disease List was updated by adding the mandatory reporting of "Influenza-Associated Pediatric Deaths". Mandatory disease reporting is authorized by SDCL 34-22-12 and ARSD 44:20. A Reportable List is found as a yellow insert in this issue of the Public Health Bulletin and is found on the web at: www.state.sd.us/doh/Disease/report.htm

Influenza-Associated Pediatric Mortality:

Case Definition: An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. Influenza-associated deaths in all persons aged <18 years should be reported.

A death should not be reported if:

1. There is no laboratory confirmation of influenza virus infection.
2. The influenza illness is followed by full recovery to baseline health status prior to death.
3. The death occurs in a person 18 years or older.
4. After review and consultation there is an alternative agreed upon cause of death.

Laboratory criteria for diagnosis

Laboratory testing for influenza virus infection may be done on pre- or post-mortem clinical specimens, and include identification of influenza A or B virus infections by a positive result by at least one of the following:

- Influenza virus isolation in tissue cell culture from respiratory specimens;
- Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens;
- Immunofluorescent antibody staining (direct or indirect) of respiratory specimens;
- Rapid influenza diagnostic testing of respiratory specimens;
- Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens;
- Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera*.

Case classification

Confirmed - A death meeting the clinical case definition that is laboratory confirmed.

Laboratory or rapid diagnostic test confirmation is required as part of the case definition; therefore, all reported deaths will be classified as confirmed.

Comment

*Serologic testing for influenza is available in a limited number of laboratories, and should only be considered as evidence of recent infection if a four-fold rise in influenza (HI) antibody titer is demonstrated in paired sera. Single serum samples are not interpretable.

All disease reports may be to the South Dakota Department of Health by

- **Secure website: www.state.sd.us/doh/diseasereport** or
- **Telephone: 1-800-592-1804** confidential answering-recording device, or **1-800-592-1861** or **605-773-3737** for a disease surveillance person during normal business hours; after hours to report Category I diseases or other emergencies, call **605-280-4810** or
- **Fax: 605-773-5509 or**
- **Mail** or **courier,** address to: Infectious Disease Surveillance, Department of Health, 615 East 4th Street, Pierre, SD 57501; marked *"Confidential Disease Report"*

South Dakota Quit Line expands options for physician referral

A new service is now available to increase the number of tobacco users who can benefit from the South Dakota Quit Line. services.

The Quit Line provides telephone-based cessation counseling at no charge, which has been shown to at least double long-term quit rates. The line also provides reduced cost cessation medication.

Until now, health care providers have only been able to provide Quit Line materials to their patients who are tobacco users and to encourage them to call the toll-free number. Now providers can send a fax referral form directly to the Quit Line, asking them to call patients who provide written permission to be contacted.

If you would like to refer patients to the South Dakota Quit Line by fax, please send your request by fax to 1-605-322-6898. Your facility will then be registered with the Quit Line for fax referrals.

Tobacco users may also still initiate contact themselves by calling the toll-free line at 1-866-SD-QUITS (737-8487).

If you have questions about this program, please contact Teri Christensen at 605-773-3737. Order Quit Line referral materials such as brochures and business-size cards at https://www.state.sd.us/applications/ph18publications/secure/puborder.asp (select the "Health Promotion" tab and scroll down to "tobacco control").

South Dakota Department of Health - Infectious Disease Surveillance

Selected Morbidity Report, 1 January – 31 December 2004 (provisional)

	Disease	2004 year-to-date	5-year median	Percent change
Vaccine-Preventable Diseases	Diphtheria	0	0	na
	Tetanus	0	0	na
	Pertussis	100	8	+1150%
	Poliomyelitis	0	0	na
	Measles	0	0	na
	Mumps	0	0	na
	Rubella	0	0	na
	Haemophilus influenza type b	0	1	na
Sexually Transmitted Infections and Blood-borne Diseases	HIV infection	19	22	-14%
	Hepatitis B	0	2	-100%
	Chlamydia	2,544	1,837	+38%
	Gonorrhea	306	263	+16%
	Genital Herpes	322	310	+4%
	Syphilis, primary & secondary	0	0	na
Tuberculosis	Tuberculosis	11	16	-31%
Invasive Bacterial Diseases	*Neisseria meningitidis*	4	5	-20%
	Invasive Group A *Streptococcus*	21	14	+50%
Enteric Diseases	*E. coli* O157:H7	33	44	-25%
	Campylobacteriosis	271	160	+69%
	Salmonellosis	154	121	+27%
	Shigellosis	13	18	-28%
	Giardiasis	87	106	-18%
	Cryptosporidiosis	44	15	+193%
	Hepatitis A	4	3	+33%
Vector-borne Diseases	Animal Rabies	94	96	-2%
	Tularemia	4	7	-43%
	Rocky Mountain Spotted Fever	4	2	+100%
	Malaria (imported)	1	0	na
	Hantavirus Pulmonary Syndrome	1	0	na
	Lyme disease	1	0	na
	West Nile Virus disease	51	0	na
Other Diseases	*Streptococcus pneumoniae*, drug-resistant	5	3	+67%
	Legionellosis	5	3	+66%
	Additionally, the following diseases were reported: Bacterial Meningitis, non-meningococcal (19); chicken pox (99); *E. coli,* shigatoxin (2); Invasive Group B *Strep.* (11); Listeriosis (2) *Streptococcal* Toxic Shock Syndrome (1); MRSA, invasive (25); Viral Encephalitis, herpes simplex virus (1)			

Communicable diseases are obligatorily reportable by physicians, hospitals, laboratories, and institutions.
The **Reportable Diseases List** is found at www.state.sd.us/doh/Disease/report.htm or upon request.
Diseases are reportable by telephone, mail, fax, website or courier.
Telephones: 24 hour answering device 1-800-592-1804; for a live person at any time call 1-800-592-1861; after hours emergency 605-280-4810. **Fax** 605-773-5509.
Mail in a sealed envelope addressed to the DOH, Office of Disease Prevention, 615 E. 4th Street, Pierre, SD 57501, marked "Confidential Medical Report". **Secure website:** www.state.sd.us/doh/diseasereport.htm.

2,500 copies of this Bulletin were printed by the Department of Health at a cost of $0.17 per copy.